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ABSTRACT

The American Management Association's (AMA) 10th annual survey on workplace testing was mailed in January 1996 to a sample of its 9,500 member companies, resulting in 961 usable responses. The survey sought to determine how many firms test for "basic skills," how job applicants perform on these tests, how much the tests costs, and what firms do with the test results. The questionnaire defined basic skills as the ability to read instructions, write reports, and/or do arithmetic at a level adequate to perform common workplace tasks. Findings were as follows: the share of surveyed firms that perform testing in basic skills has remained relatively constant since 1991, with about 40-45 percent of the firms testing; most testing was for job applicants for entry-level jobs; job applicant testing, like testing overall, has shown scant growth since 1991, although there has been a rapid increase in applicant testing for mathematics skills; the share of applicants deficient in basic skills remains high; one-third of the 635,000 job applicants tested by respondent firms from 1990-1995 lacked the literacy and/or mathematics skills necessary to do the job for which they applied; 87 percent of firms that test job applicants do not hire applicants whose skills are deficient; testing costs averaged $26,098 per firm, but 70 percent of the firms spent less than $10,000; the number of firms that test current employees dropped from 30 percent to 19 percent from 1995-1996; nearly half of surveyed companies that test current employees provide remedial training for skills-deficient workers; and one-third of the remedial programs were designed entirely by an outside provider and more than half are delivered entirely by outside providers. (KC)

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1996 AMA Survey

Basic Skills Testing & Training

Summary of Key Findings

The AMA questionnaire defines "basic skills" as "functional workplace literacy, i.e., the ability to read instructions, write reports, and/or do arithmetic at a level adequate to perform common workplace tasks."

The share of surveyed firms that performs testing in basic reading and/or math skills has remained relatively constant since 1991, and the year-by-year changes since 1991 are within the margins of error for each year's sample; in other words, the lower figures in recent years compared with 1993 do not indicate an actual decline. It does confirm the lesser growth rates apparent since 1991:

	1990	1991	1992	1993	1994	1995	1996
Test for basic skills (%)	35.5	41.7	46.3	48.4	44.1	44.1	45.0
Increase from previous year (%)		17.5	11.0	4.5	-8.9	0.0	2.0
Increase from 1990 (%)		17.5	30.4	36.3	24.2	24.2	26.8

TESTING JOB APPLICANTS

It is important to note that the AMA questionnaire does not differentiate between testing of entry-level workers and other job applicants. Our definition of "basic skills" (see above) guides respondents to report policies and practices in basic literacy and math testing, as opposed to job competency testing, which may include anything from high-level mathematics for engineering candidates to typing tests for administrative assistants. It should not be assumed that all pre-employment skills tests focuses on entry-level applicants, but it is a fair assumption that most of these tests are administered at the entry level.

Job applicant testing, like testing overall, has shown scant growth since 1991, although (as will be seen) there has been a rapid increase in applicant testing for math skills. As above, the changes from 1991 through 1996 are within the margins of error, indicating neither an increase nor a decline:

	1990	1991	1992	1993	1994	1995	1996
Test applicants for basic skills (%)	33.3	38.0	42.8	44.0	39.4	39.9	43.0
Increase from previous year (%)		14.1	12.6	2.8	-10.5	1.3	7.8
Increase from 1990 (%)		14.1	28.5	32.1	18.3	19.8	29.1

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Job applicants are more likely to be tested for math skills than in reading:

	1990	1991	1992	1993	1994	1995	1996
Test applicants for literacy skills (%)	28.4	30.2	33.7	38.9	33.4	31.3	33.4
Increase from previous year (%)		6.3	11.6	15.4	-14.1	-6.0	6.7
Increase from 1990 (%)		6.3	18.7	37.0	17.3	10.2	17.6
Test applicants for math skills (%)	27.6	34.4	40.0	40.6	36.3	36.5	40.6
Increase from previous year (%)		24.6	16.3	1.5	-10.6	0.6	11.2
Increase from 1990 (%)		24.6	44.9	47.1	31.5	32.2	47.1

Note the strong growth in math testing since 1990 (nearly 47.1%), a much more rapid rate of increase than in literacy testing (17.6%). Ten percent of respondent firms test math skills only, while three percent test literacy skills only; 31 percent test both.

Eight percent test all job applicants for literacy skills, while an additional 26 percent test selected applicants. Six percent test all applicants for math skills, and 35 percent test selected applicants in math. Where testing is selective, the selection criteria is most often job function or category (in 93% of firms that test applicants); in two percent of such firms, minimum completed school grade is the basis for selection.

Job Applicant Deficiency Rates: The share of applicants deficient in basic skills remains high. One-third of the 635,000 job applicants tested by respondent firms from 1990 through 1995 lacked the literacy and/or math skills necessary to do the job for which they applied:

	1990	1991	1992	1993	1994	1995	Totals
Respondents giving numbers:	473	311	143	213	289	278	1,707
Number of applicants tested:	150,127	78,815	48,910	65,617	140,928	150,541	634,938
Number with deficient test results:	39,442	27,991	19,222	23,264	54,195	49,904	230,523
Applicant deficiency rate:	26.3%	35.5%	39.3%	35.5%	38.5%	33.1%	36.3%

One-fourth of firms that test applicants reported deficiency rates of 50 percent or higher, compared with 30% in that high range a year before. Thirty-six percent reported rates below 20%, identical to the 1994 figure.

Deficiency rates varied widely by business category. Manufacturers reported a 46% deficiency rate; those in the service sector, a 27% rate. Wholesalers and retailers had a 16% rate, half the level reported by the financial services sector. These figures reflect the different job requirements in each sector, rather than the objective literacy and math skills of the applicants.

The AMA questionnaire asked for the whole number of job applicants tested for basic skills in the calendar year and the number of those tested that "revealed deficiencies." Data analysis cannot differentiate between those tested for literacy or math. However, among companies that test only math skills, and not literacy skills, the deficiency rate was 47%; among companies that do the reverse -- testing only in reading skills and not in math -- the deficiency rate was 32%, a strong indication that applicants are more likely to lack sufficient math skills than literacy skills.

Action on skills-deficient applicants: Eighty-seven percent of firms that test job applicants say they will not hire job-seekers when pre-employment testing shows them to be skills-deficient. Two percent hire skills-deficient applicants and assigned them to obligatory remedial training; one percent hire them and offer voluntary remedial training. Five percent take "other" actions, which include re-testing at a later date.

TESTING CURRENT EMPLOYEES

After current employee testing showed strong growth rates from 1990 to 1992, they flattened through 1995 and showed an absolute steep decline in from 1995 to 1996. The figures from 1992 through 1995 are within the margins of error for each year's samples:

	1990	1991	1992	1993	1994	1995	1996
Test employees for basic skills (%)	11.0	21.4	28.9	33.0	27.3	29.6	18.5
Increase from previous year (%)		94.5	35.0	14.2	-17.2	8.4	-37.5
Increase from 1990 (%)		94.5	235.6	200.0	148.2	169.1	68.2
Test employees for literacy skills (%)	9.8	15.6	22.3	28.7	22.2	22.8	14.8
Increase from previous year (%)		59.2	42.9	28.7	-22.6	2.7	-35.1
Increase from 1990 (%)		59.2	127.6	192.9	126.5	132.7	51.0
Test employees for math skills (%)	9.9	19.9	27.6	31.9	25.9	29.3	17.5
Increase from previous year (%)		101.0	37.2	16.8	-18.8	13.1	-40.3
Increase from 1990 (%)		101.0	178.8	222.2	161.6	196.0	76.8

What could explain this decrease? We suggest three factors that may be at work:

- o More applicant testing reduces the need to test current employees, as skills-deficient workers are stopped at the door;
- o Closer job supervision and performance appraisal may reveal deficiencies without recourse to formal testing; and
- o Cost-cutting initiatives may target basic skills testing programs.

Action on Skills-Deficient Employees: Nearly half of surveyed companies that test employees (45%) provide remedial training for skills-deficient workers, but only 14 percent make such training obligatory when testing reveals deficiencies. Thirty-nine percent offer remedial training on a voluntary basis. Eight percent of companies that test employees re-assign skills-deficient workers to other jobs; two percent dismiss such workers, down from 6.6 percent in 1989, when remedial training programs were not widespread. Fifty-six percent deny promotion to candidates when testing reveals deficiencies.

Testing Costs: Costs are, of course, a function of the number of people tested. Respondent companies spent an average $26,087 on testing in 1995, but 70 percent spent less than $10,000 on testing, and only ten percent spend as much as $50,000.

REMEDIAL TRAINING PROGRAMS

Nineteen percent of respondent firms sponsor remedial training programs. There is a high (but not exact) correlation between testing and training: companies that test employees for basic skills are four times more likely to sponsor remedial training programs than companies that do not test employees. Again, the statistical variations from 1992 to 1996 are within the margins of error for each year's samples:

	1990	1991	1992	1993	1994	1995	1996
Sponsor remedial training programs (%)	13.7	15.2	17.8	23.7	20.2	18.7	18.0
Increase from previous year (%)		10.9	17.1	33.1	-17.3	-7.4	-3.7%
Increase from 1990 (%)		10.9	29.9	73.0	47.4	36.5	31.4

Training Costs: Costs, which are a function of the number of trainees, are not easily determined, due to differing accounting procedures: some respondents include trainer salaries and training space overhead, some do not. On average, remedial programs trained 89 people in 1995, at a cost of $286 per trainee.

Program Design & Delivery: One-third (35%) of the remedial programs in respondent firms were designed entirely by an outside provider, and more than half (53%) are delivered entirely by outside providers. Fifty-six percent of remedial training providers integrate such training into wider training programs; 38 percent categorize remedial training as a "standalone" program.

Programs are evenly split on compensation for time spent in remedial training: 52% of remedial training providers treat trainee time as paid time, 48% as unpaid time.

ABOUT THIS SURVEY

The American Management Association's tenth annual survey questionnaire on workplace testing was mailed in January 1996 to human resources managers in AMA-member companies. We received 961 usable responses to form the database for the present study. The current sample accurately represents AMA's corporate membership of 9,500 U.S. organizations, which in total employ a quarter of the American workforce. It is not a statistically accurate sampling of all U.S. businesses.

The database is not identical year to year (that is, the AMA workplace testing survey is not a longitudinal study), but yearly samples are sufficiently alike that they allow statistically valid year-to-year comparisons. The 1996 sample has a 3.5% margin of error; larger samples in earlier years had margins of error of up to 2.5%. The AMA samples for the past three years:

Business Category	1994	1995	1996
Manufacturing	48.1%	50.3%	49.2%
General Services	25.2%	23.8%	25.8%
Finance, Insurance, Real Estate	7.2%	7.0%	8.3%
Business and Professional Services	6.9%	5.6%	5.7%
Wholesale and Retail Trade	6.4%	4.5%	4.9%
Transportation	3.0%	2.1%	2.2%
Public Administration	3.2%	3.0%	2.1%
Unclassified and Unclassifiable	0.0%	3.7%	1.8%

Annual Sales (or budget, if nonprofit)	1994	1995	1996
Less than $10 million	8.1%	7.5%	6.3%
$10 to $49.9 million	24.8%	18.9%	18.4%
$50 to $249 million	24.8%	28.8%	27.0%
$250 to $499 million	9.6%	9.6%	11.2%
$500 million or more	19.1%	27.3%	27.6%
Not Reported	8.3%	8.0%	9.5%

Questionnaire production and scanning for tabulation were performed by Technometrica, Inc., Emerson, N.J. Tabulations are the responsibility of the Director of Management Studies, American Management Association, who is also responsible for any errors of fact or data calculation.

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